

**09/478,122**  
**Notice of Allowability**

Application No.

09/478,122

Examiner

Lun-See Lao

Applicant(s)

THOMPSON, LAURENCE A.

Art Unit

2615

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to THE AMENDMENT FILED ON 07-24-2006.
2. ☒ The allowed claim(s) is/are 36,38-49,51-53 and 55-57.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### **DETAILED ACTION**

1. This action responds to the amendment filed on 07-24-2006. Claims 1-35 have been canceled and claims 36 and 39-40 have been amended and claims 50-57 have been added. Claims 36-57 are pending.

### ***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07-26-2006 has been entered.

### ***Examiner's Amendment***

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

4. Authorization for this examiner's amendment was given in a personal interview with MR. James R. Hannah on October 19, 2006

5. The application has been amended as follows:

Please replace claims 36, 53 and 57 as following:

Art Unit: 2615

Claim 36. (currently amended) An apparatus for delaying an audio signal comprising:

a first FIFO register receptive to a digital audio signal, the digital audio signal having an associated clock signal;

an audio format detection circuit coupled to the first FIFO register and operative to detect a format of the digital audio signal by analyzing the associated clock signal;

a memory controller coupled to the FIFO register;

a memory chip coupled to the memory controller;

a write address generator coupled to the audio format detection circuit and memory controller;

a read address generator coupled to the memory controller; and

a second FIFO register coupled to the memory controller and operative to provide a time delay in the digital audio signal the duration of which is related to the detected format of the digital audio signal;

wherein the digital audio signal further comprises a serial audio clock signal and a plurality of accompanying signals;

wherein the audio format detection circuit comprises a synchronization circuit operative to synchronize the serial audio clock and a reference clock and, an edge detection circuit operative to detect edge transitions in the synchronized serial and reference clock.

Art Unit: 2615

Claim 53 (currently amended) A method comprising:

- receiving a digital audio signal;
- analyzing a clock signal associated with the digital audio signal to determine a audio format of the digital audio signal;
- providing an audio signal delay according to the audio format of the digital audio signal; and
- outputting the digital audio signal;
- detecting a resulting value from a clock signal synchronized with the digital audio signal and a reference clock;
- latching the resulting value;
- looking up a memory write address using the resulting value;
- comparing the memory write address to a previous memory write address; and
- if the memory write address is unequal to the previous memory write address,  
then retrieving a new audio signal delay.

Claim 57 (currently amended) An apparatus comprising:

- means for receiving a digital audio signal;
- means for analyzing a clock signal associated with the digital audio signal to determine a audio format of the digital audio signal;
- means for implementing audio signal delay by the audio format of the digital audio signal; and
- means for outputting the digital audio signal.

means for detecting a resulting value from a clock signal synchronized with the digital audio signal and a reference clock;

means for latching the resulting value;

means for looking up a memory write address using the resulting value;

means for comparing the memory write address to a previous memory write address; and

means for if the memory write address is unequal to the previous memory write address, then retrieving a new audio signal delay.

Please amended claims 38-40, 42 and 51-52 as following:

38 (currently amended) after "The apparatus as claimed in claim" delete "37" and insert "36",

39 (currently amended) after "The apparatus as claimed in claim" delete "37" and insert "36",

40 (currently amended) after "The apparatus as claimed in claim" delete "37" and insert "36",

42 (currently amended) after "The apparatus as claimed in claim" delete "37" and insert "36",

51 (currently amended) after "The apparatus as claimed in claim" delete "50" and insert "36",

52 (currently amended) after "The apparatus as claimed in claim" delete "37" and insert "36",

Please cancel claim 37, claim 50 and claim 54.

***Allowable Subject Matter***

6. Claims 36, 38-49, 51-53 and 55-57 are allowed.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8. Any response to this action should be mailed to:

Mail Stop \_\_\_\_ (explanation, e.g., Amendment or After-final, etc.)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Facsimile responses should be faxed to:  
**(571) 273-8300**

Hand-delivered responses should be brought to:  
Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lao,Lun-See whose telephone number is (571) 272-7501. The examiner can normally be reached on Monday-Friday from 8:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian, can be reached on (571) 272-7848.


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 whose telephone number is (571) 272-2600.

Application/Control Number: 09/478,122

Page 7

Art Unit: 2615

Lao, Lun-See *L.S.*  
Patent Examiner  
US Patent and Trademark Office  
Knox  
571-272-7501  
Date 10-20-2006

  
VIVIAN CHIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600